



ANDHRA UNIVERSITY

అంధ్ర విశ్వకోణ పరిషత్

Re-accredited by NAAC with A++ Grade & Score : 3.74

INTERNSHIP PROJECT REPORT

Based on Frontend Software Engineer
Internship At
SYMBIOSYS TECHNOLOGIES,
IT Park,Hill No.2,Rushikonda IT SEZ,
Visakhapatnam,A.P.

**BACHELOR OF ENGINEERING IN
INFORMATION TECHNOLOGY**

By

**Student name: Karpuram Rohit
Reg no: 322107311017
Sec : 3/4 IT**

ACCEPTANCE LETTER FROM THE ORGANIZATION/COMPANY



SYMBIOSYS TECHNOLOGIES
IT Park, Hill No. 2, Rushikonda
Visakhapatnam, A.P., INDIA.

Date: 20-06-2024

CERTIFICATE OF INTERNSHIP

Sub: Successful completion of Internship

This is to certify that Mr. KARPURAM ROHIT a student of, ANDHRA UNIVERSITY COLLEGE OF ENGINEERING bearing the Reg. No 322107311017 has successfully completed project in **Payslip Generation Using HTML & JS** at SYMBIOSYS TECHNOLOGIES from 03-05-2024 to 20-06-2024 under our guidance. He has exhibited Good analytical skills and demonstrated good technical understanding.

Sathish Babu
Project Manager



Ramana Rao
HR Manager

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ABSTRACT

During my internship at Symbiosis Technologies, I participated in the development of a **Pay Slip Management System** aimed at addressing a critical issue faced by the organization. The project was initiated in response to the difficulties employees encountered in accessing and locating their salary details, which were traditionally communicated through Excel sheets sent from the head office.

The Pay Slip Management System was designed to streamline this process by providing a centralized platform for employees to view and manage their salary information. This system not only enhances accessibility but also improves the accuracy and security of payroll data. Throughout the internship, I collaborated with a team of developers and stakeholders to gather requirements, design the user interface, and implement key functionalities.

The successful deployment of this system is expected to significantly reduce the time spent on salary inquiries and enhance employee satisfaction by providing real-time access to payroll information.

2. PROFILE OF THE COMPANY/ORGANIZATION



Symbiosis technologies

Symbiosys Technologies provide high-quality services and solution to our client's worldwide.

The development center for Symbiosys Technologies is located in India with offices in the US. The company aims at developing innovative and cost effective end to end technology solutions with high performance and security.

Since our inception, Symbiosys Technologies has always been committed to delivering excellent results for our clients catering to their requirement by providing them with the highest quality of offshore development services on various platforms.

As results-oriented problem solvers, we thrive to successfully meet our client's requirements on a priority basis. We take pride in teaching the technology to everyone we talk to and feel privileged in getting them to experience it, we specialize in providing Xpress services (Express Solutions online).

3. SCHEDULE OF THE INTERNSHIP

Week 1: Project Planning and Requirements Gathering

•Objectives:

- Define project scope and objectives.
- Identify stakeholders and gather requirements through meetings and surveys.

•Tasks:

- Create a project plan outlining deliverables and timelines.
- Document functional and non-functional requirements.
- Establish communication channels.

Week 2: System Design

•Objectives:

- Design the architecture of the system.
- Create wireframes and mockups for the user interface.

•Tasks:

- Develop database schema for employee and payroll data.
- Design user interface components (upload, display payslip, etc.).
- Review designs with stakeholders for feedback.

Week 3: Development - Backend

•Objectives:

- Set up the backend environment and database.

•Tasks:

- Implement APIs to handle file uploads and data retrieval.
- Write scripts to process Excel files and extract employee data.
- Integrate with the database to store and manage employee records.

Week 4: Development - Frontend

- Objectives:**

- Build the frontend of the application.

- Tasks:**

- Develop the user interface using HTML, CSS, and JavaScript.
- Implement features for file uploading, employee ID input, and payslip generation.
- Ensure responsive design for various devices.

Week 5: Testing

- Objectives:**

- Conduct thorough testing of the application.

- Tasks:**

- Perform unit testing for individual components.
- Conduct integration testing to ensure all parts work together.
- Gather feedback from stakeholders and make necessary adjustments.

Week 6: Deployment and Documentation

- Objectives:**

- Prepare the system for deployment and create user documentation.

- Tasks:**

- Deploy the application to a production environment.
- Create user manuals and technical documentation.
- Conduct training sessions for end-users and gather final feedback.

Ongoing: Maintenance and Support

- Monitor the application for any issues and provide ongoing support.
- Plan for future enhancements based on user feedback.

4. INTERNSHIP ACTIVITIES

Role:

During my internship at Symbiosis Technologies, I actively participated in the design, development, and implementation of the Pay Slip Management System. My key responsibilities included:

1. Problem Analysis:

I worked closely with the project manager and other team members to understand the pain points of employees. They were facing difficulties in locating and verifying their salary details from Excel sheets sent by the head office. We identified that the current method was time-consuming and inefficient, especially for employees with limited technical knowledge.

2. System Design and Planning:

Based on the analysis, I contributed to creating the system's architecture. The goal was to develop a user-friendly web interface that could:

- Upload Excel files containing salary data.
- Process and extract specific employee salary details.
- Generate and display payslips for individual employees.
- Offer options to print and download the payslip in a convenient format.

My role included creating the front-end design, ensuring that it was responsive, visually appealing, and easy to navigate.

3. Front-End Development:

I designed and coded the front-end using HTML, CSS, and JavaScript. I focused on building an interface that allows users to:

- Upload an Excel file containing employee salary data.
- Input their Employee ID to fetch their salary details.

The web interface included interactive elements like buttons for uploading files, generating payslips,

and options for printing and downloading the payslip.

4.File Processing Logic:

One of my significant contributions was integrating the XLSX JavaScript library to handle Excel file uploads. I implemented the following functionalities:

- Reading the Excel file and converting it into a format (JSON) that could be easily processed by JavaScript.
- Extracting relevant salary information like basic pay, allowances, deductions, and net pay for each employee based on their Employee ID.
- Ensuring data accuracy and proper mapping of salary components to the payslip structure.

5.Payslip Generation:

I developed the functionality to dynamically generate a detailed payslip using the extracted data. The payslip format included:

- Employee details (ID, Name, Designation, Date of Joining, etc.).
- A breakdown of income components such as basic pay, house rent allowance, travel allowance, etc.
- Deductions like income tax, professional tax, and provident fund.
- Gross pay, total deductions, and net pay.

This information was displayed in a structured, printable format using an HTML table.

6.Additional Features (Printing and Downloading):

To enhance user experience, I added:

- Print functionality: Using JavaScript's window.print() function, I enabled employees to print their payslip directly from the browser.
- Download functionality: I implemented a feature to download the payslip as an HTML file, allowing employees to save it locally.

7. Testing and Debugging:

I conducted thorough testing to ensure that the system handled a variety of real-world scenarios, such as:

- Uploading large Excel files with multiple records.
- Handling different data formats (e.g., date formats, currency formats).
- Checking for edge cases, such as missing or incorrect employee IDs.

I also worked on debugging and refining the code to ensure smooth functionality across various devices and browsers.

8. Collaboration and Communication:

Throughout the project, I actively communicated with the project manager and other team members, contributing to discussions on technical challenges and proposing solutions. I also documented the process to ensure easy handover for future maintenance or updates.

Methodology:

The project followed a structured development methodology that ensured systematic problem-solving and efficient execution. The methodology included the following phases:

1. Requirement Gathering and Analysis:

- We started with a meeting with the HR team and the employees to understand the current payroll process and the specific issues they faced with accessing their salary details from Excel sheets.
- We identified key requirements, such as the ability to upload salary data in Excel format, quickly locate employee records using Employee IDs, and generate payslips in an organized and readable format.
- A functional requirement document was prepared, outlining the specific needs and features to be developed.

2. Design Phase:

- User Interface Design:

I collaborated with the team to design a clean, simple, and intuitive web interface. Key design goals included ease of navigation, clarity of information, and seamless interaction between the user and the system. Wireframes were created to visualize the layout of the web pages.

- System Architecture:

We planned the overall architecture of the system, including:

- A front-end for user interaction (for file upload, ID input, and payslip display).
- A back-end process to read and process the Excel data (using JavaScript and the XLSX library).
- Data extraction and transformation logic to map Excel rows and columns to the corresponding fields in the payslip.
- Security considerations to ensure the privacy of employee data, such as restricting access to sensitive salary information to authorized personnel.

3. Technology Stack Selection:

- We chose a combination of HTML, CSS, and JavaScript for front-end development to create a responsive, interactive, and accessible user interface.
- XLSX.js library was selected for its ability to read, manipulate, and process Excel files in the browser. It was chosen for its compatibility and ease of integration with JavaScript.

4. Development:

- File Upload and Processing:

I implemented the feature allowing users to upload an Excel file. Using the XLSX library, I developed a function that reads the uploaded file and converts the data into a JSON format, which could be manipulated easily within JavaScript.

- Data Extraction and Mapping:

I wrote code to extract data from the JSON object and map it to predefined fields in the payslip format. Each employee's data, including earnings, deductions, and net pay, was mapped and displayed dynamically based on the Employee ID input.

- Payslip Generation:

The payslip was dynamically generated using HTML tables, displaying all relevant salary details.

I ensured the payslip format was professional and printable.

- Additional Features:

I integrated features that allowed employees to print or download their payslip. The Print function used the browser's native printing capabilities, and the Download function enabled saving the payslip in HTML format.

5. Testing and Quality Assurance:

- Functionality Testing:

We tested the system extensively to ensure that the file upload, data extraction, and payslip generation worked correctly. Test cases included uploading valid and invalid files, entering valid and invalid Employee IDs, and checking the accuracy of salary details.

- Usability Testing:

The system was tested by several employees to ensure ease of use. Their feedback helped in fine-tuning the user interface, especially in terms of navigation and the clarity of displayed information.

- Cross-Browser Testing:

The web application was tested across different browsers (Chrome, Firefox, Edge) to ensure compatibility and consistent performance.

6. Deployment:

- After successful testing and debugging, the system was deployed for use within the company. Employees could now easily upload their Excel files, input their Employee ID, and generate their payslip in just a few clicks.

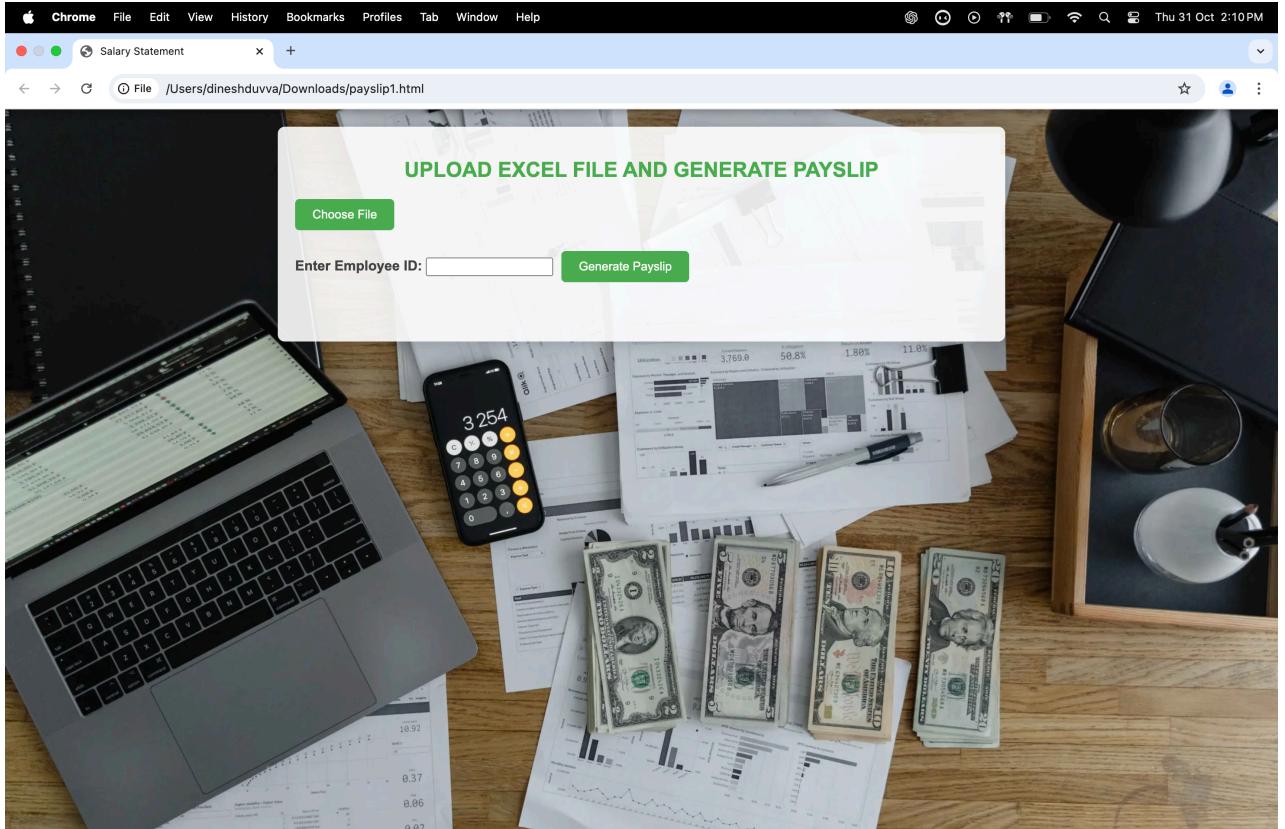
- A deployment guide and documentation were created to help the HR department manage the system going forward.

7. Post-Deployment Maintenance:

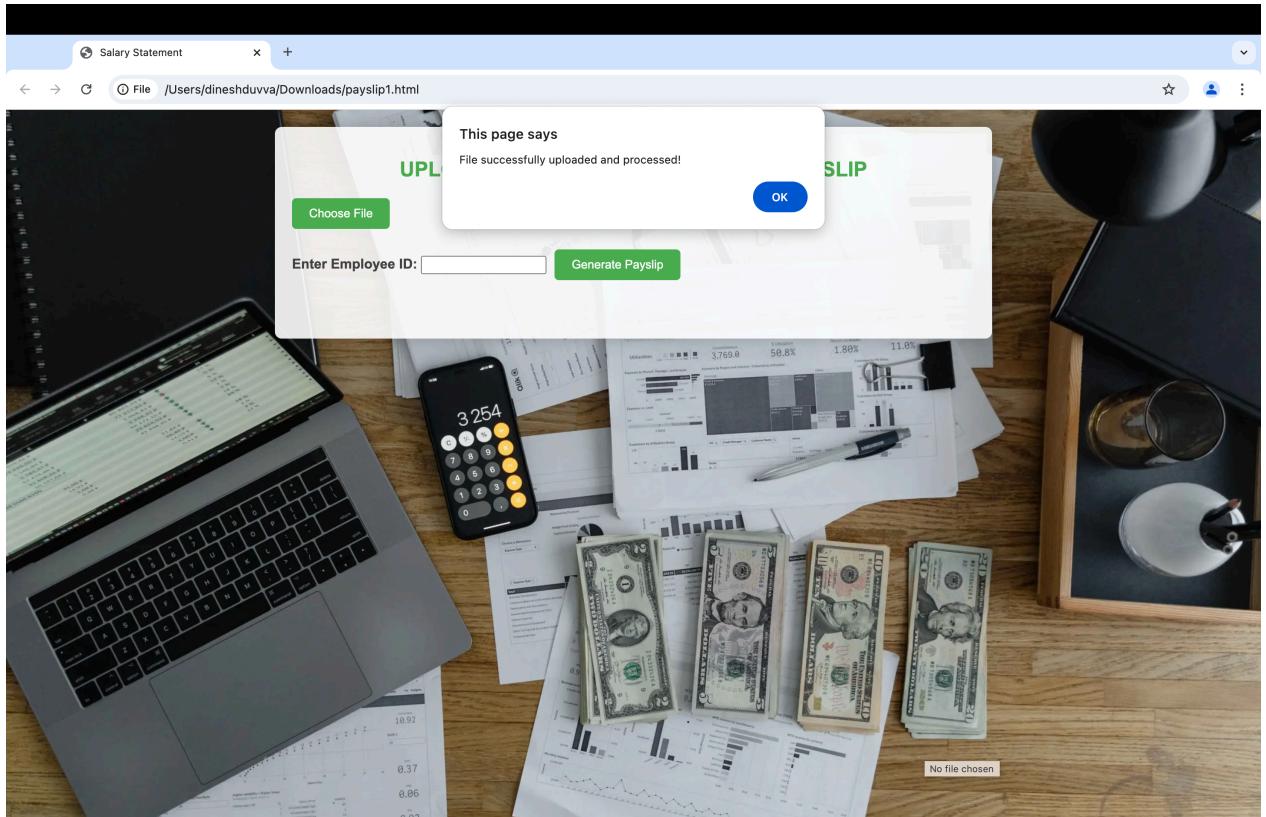
- After deployment, we monitored the system to ensure there were no bugs or issues reported by users. I was involved in providing technical support and making minor adjustments based on user feedback.

5. OUTCOMES

1. Index page



2. Xlxs File upload



Output:

Salary Statement

/Users/dineshduvva/Downloads/payslip1.html

SYMBIOSYS TECHNOLOGIES
Plot No 1 & 2, Hill no-2, IT Park,
Rushikonda, Visakhapatnam-45
Ph: 2550369, 2596567

SALARY STATEMENT FOR THE MONTH OF MAY 2024

| | | | |
|---------------|------------|-------------------------|-------------|
| Employee Code | 1 | Date of Joining | 01/01/1970 |
| Employee Name | Dinesh | Employment Status | full time |
| Designation | accounting | Statement for the month | outstanding |

| Classified Income | Amount (Rs.) | Deductions | Amount (Rs.) |
|-----------------------------|--------------|----------------------|--------------|
| Basic Pay | 5000 | Professional Tax | 500 |
| House Rent Allowance | 1000 | Income Tax | 2000 |
| City Compensatory Allowance | 500 | Provident Fund | 600 |
| Travel Allowance | 900 | ESI | 0.00 |
| Food Allowance | 0.00 | Leaves - Loss of Pay | 0.00 |
| Performance Incentives | 0.00 | Others | 0.00 |

| | | | | | |
|-----------|-----|------------|------|---------|------|
| Gross Pay | 500 | Deductions | 0.00 | Net Pay | 1000 |
|-----------|-----|------------|------|---------|------|

AUTHORIZED SIGNATORY
Sudheer
H.R Executive

We request you to verify employment details with our office on email: hr@symbiosystech.com. (+91-0891-2550369)

ASSESSMENT OF INTERNSHIP



SYMBIOSYS TECHNOLOGIES
IT Park, Hill No. 2, Rushikonda
Visakhapatnam, A.P., INDIA.

Date: 20-06-2024

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Sathish
Project Manager



Raveen
HR Manager

Conclusion

This internship served as a transformative experience, allowing me to apply my theoretical knowledge to the practical challenge of developing a payslip generation system using HTML and JavaScript. It provided a comprehensive understanding of front-end development, data handling, and creating user-centric applications.

By working on this project, I honed my technical skills, problem-solving abilities, and gained hands-on experience with best practices in web development. The internship also enhanced my analytical thinking and attention to detail, essential for designing efficient and reliable software solutions.

Moving forward, I plan to build on these skills by exploring advanced JavaScript frameworks, improving my proficiency in backend technologies to develop full-stack applications, and contributing to open-source projects. I am confident that the experience gained during this internship will serve as a solid foundation for my career in software development.